

AMENDMENT TO THE CLAIMS

The status of the claims is:

Claims 1-35: (cancelled)

Claim 36: (currently amended) The system of claim ~~4433~~ wherein menu selectable data files in the library database list include connections comprising welds, bonds, bolts, sealers, adhesives, pin joints, and ball joints.

Claims 37 - 39: (cancelled)

Claim 40: (currently amended) The system of claim ~~4433~~ wherein, in the process of building the white body model and associating mesh and connection data relating to the manner in which conjoined parts are joined in the assembly, imperfections in the mesh, are identified and fixed before a virtual simulation of the model is performed.

Claim 41: (currently amended) The system of claim ~~4433~~ wherein, upon the joint approval of the results of a white body model simulation by the task group, the assembly simulated is fixed as a final design in the library.

Claims 42 and 43: (cancelled)

Claim 44: (new) A continuous loop data library for refining the design of a white body model from the beginning of a design process to the end of a design process during the creation of a simulated white body model of a mechanical assembly comprising:

a central library database that updates itself with the inclusion of a new record of a simulated mechanical assembly upon the completion of an evaluation of that mechanical assembly, the library including a menu selectable list of data records for parts, CAD data, mesh data, parts connection data, parts assembly data, stock parts data, and assembly evaluation data, all associated with a predetermined assembly;

individual sources of simulation model information related to the discrete categories of

design, assembly and simulation characteristics of a predetermined white body, the information sources separately accessible to distinct design, assembly and simulation testing groups of an enterprise wherein members of each group are separately associated, respectively, with the design, assembly and simulation functions of the enterprise involved in the development of a mechanical assembly;

a plurality of work stations, each work station located at a distance apart from the library database, the work stations interconnected with the library in a spoke network with respect to a central library hub wherein the work stations are uniquely accessible by individual members of separate design, assembly and simulation groups involved, respectively, with the design, assembly and simulation testing responsibilities of the white body model under development;

a menu allowing members of the enterprise design, assembly and simulation testing task groups to select data files related to a predetermined mechanical assembly that is to be evaluated;

the menu accessible at each work station and restricting a task force member's access to the library in accordance with a member's association with one of a design, assembly or simulation group function in the enterprise, the menu having categories comprising: 1) selecting parts and retrieving the data files associated with the selected parts; 2) associating the selected parts and the characteristics of the parts selected with the mechanical assembly to provide a model; 3) selecting a connection for associating parts to be joined with each other from the library; 4) retrieving data files from the library associated with the connection; 5) associating the characteristics of the connection selected with the selected parts; 6) processing the associated connection and parts through a mesh process to provide an assembly mesh; 7) saving data associated with the assembly mesh in a database; 8) building a white body model; 9) translating the model into a data record; 10) performing a virtual simulation of the model comprising one or more of crash impact, durability and noise; 11) recording a data record of the result of the simulation; 12) returning the data record of the model and the result of the virtual simulation of

the model to the library; and 13) upon the completion of a virtual simulation of the white body model, replacing any prior record in the library of the mechanical assembly model simulated with a record of the model created and the simulation result of the model processed;

whereby a) successive data files of simulation white body model assemblies evaluated replace previous versions of simulated model assemblies maintained in the library; b) the data files are preserved in a continuous loop sequence as refinements are made to the simulated mechanical assembly model; and c) the data files of the simulated mechanical assembly model are maintained in the library database such that the data files are accessible for subsequent use upon selection by a member of a task group.